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ABSTRACT

Psychological studies on personality characteristics obtained from individuals prior to being diagnosed as alcoholics are reviewed. Retrospective studies suggesting an association between childhood anti-social behavior and the subsequent problem of alcoholism are presented, supported by studies of the personality inventories of college students who later developed substance abuse problems. Information from adoptive studies and a study supporting the concept of childhood minimal brain dysfunction in a subtype of genetically-related alcoholism is also included. Research examining sex differences in antecedent characteristics of alcoholics is presented, along with a study supporting the interpretation of pre-alcoholics as more rebellious, impulsive, and socially aggressive than their peers. The materials offer evidence that on the average, some personality features may be discernible in both male and female clinical alcoholics long before treatment. The methodological shortcomings of many studies quoted in this review are discussed, and recent improved research techniques are reported. (Author/NRB)

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Antecedent Personality Characteristics of Alcoholics

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Presented at the American Psychological Association Annual Convention, Division 8 and 28 Symposium (0867) The Alcoholic Personality and its Measurement, Montreal, Canada, September, 1980.

Present approaches to understanding alcohol and drug addiction stress that the drug effect and the abuse process that follows occur through an interaction of the chemical acting on affected individuals differing with respect to genetic, physiological and personality characteristics in different socio-cultural settings (Chafetz, 1971). As this symposium so richly will demonstrate, the agreement in the alcohol field among researchers, theoreticians and practitioners ends about there. For many years, a small controversy over the presence or absence of an alcoholic personality has raged in the literature. Edith Lisansky-Gomberg summarized the findings 20 years ago on the role of psychological predisposition in alcoholism as "ambiguous and inconclusive." Other critics have been less kind and have referred to the search for the alcohol personality as pearl fishing empiricism unrelated to theory. Barnes (1979) in a comprehensive review covered 234 studies and concluded that breaking the problem down into investigation of a clinical alcoholic personality and a pre-alcoholic personality would be helpful. Fortunately for this reviewer, the literature on a pre-alcoholic personality is comparatively sparse.

Just about everybody has called for prospective, longitudinal studies to give the definitive answer to the question (Lisansky-Gomberg, 1968: Barnes, 1979). Unless some stable constellation of personality characteristics or behavior appear at some point in time before the development of the illness, the concept of a pre-alcoholic personality remains in doubt. In a thoughtful paper, Sadava (1978) points out that merely discovering childhood personality dimensions which precede the onset of drinking problems is not enough to explain alcoholism (even if we could

agree with each other as to what "alcoholism" is). In the end, Sadava comes down in favor of a causal model that includes personality within a network of person, environment and behavioral variables.

The search for an empirical test of the many competing physiological, psychological and sociological theories of the etiology of alcoholism led McCord and McCord (1962) to the massive data base from the Cambridge-Sommerville Youth Study. The study had begun by R. C. Cabot in 1935 of 650 lower class boys from two Massachusetts towns. In 1956, when the men were in their thirties, a follow-up ensued. Twenty-nine had become alcoholics and were compared with 158 controls on the basis of blind independent ratings by staff. The results were minimal with regard to psychological findings. "For the most part the results reported in this paper are negative and failed to confirm prior theories." There was little convincing evidence of any childhood characteristic — physical, genetic or psychological that later predicted alcoholism.

Robins, Bates and O'Neal (1962) conducted a 30-year follow-up of patients seen as children at the St. Louis Municipal Psychiatric Clinic. Their results showed a strong association in both males and females between anti-social behavior of the child and later adult alcoholism. Of 105 patients with a juvenile court record, 45 percent became alcoholic. Of 57 without a court record but showing other evidence of anti-social behavior, 25 percent became alcoholic. In patients without evidence of anti-social behavior, alcoholism was a problem in 15 percent of the cases.

Adoptive studies have also provided valuable data. Donald Goodwin

and his colleagues (Goodwin et al., 1975) looked at comparisons between alcoholic and nonalcoholic males in their famous nature-nurture study of alcoholism. As is true of most of the modern genetic studies in psychopathology, the criteria for alcoholism were stiff (Table 1). This Danish sample were interviewed extensively. As Table 2 shows, half of the 14 alcoholics described themselves as "hyperactive" during childhood and early adolescence which the authors interpreted as similar to that seen in the hyperactive child syndrome. Cadoret and Gath (1978) in another study of the inheritance of alcoholism in adopted children noted an association between "childhood socialized conduct disorder" and alcoholism.

Tarter et al., (1977) in another retrospective interview study compared 50 inpatient alcoholics of both sexes with a general psychiatric sample, 22 alcoholics anonymous members and 27 Jaycee controls. Their 50 item checklist regarding behaviors associated with minimal brain dysfunction was combined with extensive inquiry into their drinking behavior. Based on a 9-point scheme, 30 cases were classified "primary alcoholics" and were different from "secondary alcoholics," psychiatric patients and controls on 12 of the items as shown in Table 3. The authors conclude that this study adds support for the concept of childhood minimal brain dysfunction in a subtype of alcoholism with genetic-constitutional elements.

The Oakland Growth Study provided Mary Cover Jones (1968, 1971) with an opportunity to analyze the junior high, high school and adult personality ratings of normal middle class adults. Using ratings of the

frequency and amount of drinking under the advice of Jellinek she classified six males as "problem drinkers." These subjects showed several signs of maladjusted behavior in their boyhood ratings on the California Q-Set when compared to moderate drinkers and abstainers (Table 4). At all three age levels the problem drinkers were more under-controlled, impulsive and rebellious than either of the other comparison groups. The female findings are equally rich but less conclusive due to even more limiting N's. The drinking classification scheme resulted in three problem drinkers, four abstainers, and the remainder of the 45 subjects distributed between the heavy, moderate, and light classifications. Nonetheless, both the problem and the abstaining group seemed more self-defeating, vulnerable, pessemistic and withdrawn than the heavy, moderate, and light drinking groups. Another observation was that these middle class women seemed to have some distinctive personality syndromes attached to each drinking style in early adolescence that carried on into adulthood. Zucker and Devoe (1975) reported on data from a major study of adolescent drinking, its demography, antecedents and personality correlates in a high school population. They found the results for the girls to be very similar to a previously discovered strong association between anti-social behavior and various problem drinking indicators. There was however a weaker association between drinking consumption and anti-social behavior for males than for the girls. An additional finding of that study was a moderate correlation between California Psychological Inventory socialization scores and alcoholic anti-social behavior in the high school girls.

The Minnesota studies (Hoffmann, Kammeier and Loper, 1973, 1974) used

the availability of personality test data from the two major Minnesota alcoholism treatment centers, (the Willmar State Hospital and Hazelden) and the availability of Minnesota Multiphasic Personality Inventory (MMPI) scores on University of Minnesota freshmen going back several years. Approximately 600 subjects were found who appeared likely to have attended the University between the years 1947 through 1961. After an extensive search of the Student Counseling Bureau files, 22 Hazelden subjects and 10 Willmar subjects were identified with usable profiles. A smaller number had scorable answer sheets. A control group was formed by selecting randonly answer sheets of five classmates of each alcoholic individual. Our subjects averaged 13 years between the time they were tested and their admission to treatment. The diagnosis of alcoholism was based on the judgment of treatment center staff. The treatment profiles (Kammeier, 1973) show the usual diversity expected in alcoholic populations with this instrument.

When compared to their classmates, these male college students were significantly different on scales F, 4, and 9. For those of you not familiar with the MMPI, Table 5 gives you a brief description of the common meanings attached to the elevated scales in the normal population.

The Wiggins content scales (Table 6) showed few significant differences between the pre-alcoholics and controls except for authority conflict and poor health. Nevertheless, the pre-alcoholic group did not significantly exceed controls on the Kleinmuntz maladjustment scale. An analysis of item frequencies between the two groups supports the interpretation of the pre-alcoholics as being more rebellious, impulsive, and socially

aggressive than their peers. We concluded that our pre-alcoholics were relatively healthy (as were our controls) until Helmut Hoffmann scored a series of MMPI alcoholism scales on our samples (Table 7). When we began to apply the cutting scores recommended by MacAndrew things got even more interesting.

Since our study, Goldstein and Sappington (1977) reported similar findings at Carnegie Tech with a sample of 33 students of both sexes who became heavy users of marijuana and hallucinogens while at college. Table 8 shows the results running very similar to ours. It is noteworthy that both sexes were included in this and note the elevation of scale three. Goldstein and Sappington interpret their pre-user group as socially facile, adventurous, pleasure-seeking and willing to defy social norms.

Many of the studies quoted in this brief review have methodological failings in terms of design, sampling, criteria of alcoholism and limited generality. They do however accumulate an impressive amount of evidence to the effect that there are <u>on the average</u> some personality features discernible in clinical alcoholics, certainly in the case of males and very likely in the case of females, long before treatment.

Research now under way is more truly longitudinal and avoids the problems of retrospective research, haphazard funding and small samples. In addition, these studies are multi-disciplinary in nature and involve sophisticated sampling. One example of these is the undertaking of the American Institutes for Research using the Project TALENT data base. The other and most recent is the Health and Human Development Project headed by David Lester. To the extent that a single study can be definitive,

the Rutgers research will shed more light on the pre-alcoholic personality controversy than any heretofore. This study is a replicated, cross-sectional, multiple covert longitudinal study. Data will be gathered from sociology, physiology-biochemistry, personality-behavior and perception-cognition of the subjects. It looks as if "pearl hunting" has hit the bit time at last!

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Table 1. — Criteria for Drinking Categories

CATEGORY	CRITERIA
Moderate drinker	Neither a teetotaler nor heavy drinker
Heavy drinker	For at least 1 year drank daily and had 6 or more drinks at least 2 or 3 times a month; or drank 6 or more drinks at least 1 time a week for over 1 year, but reported no problems.
Problem drinker	Meets criteria for heavy drinker. Had problems from drinking but insufficient in number to meet alcoholism criteria.
Alcoholic	Meets criteria for heavy drinker. Must have had alcohol problems in at least 3 of the following 4 groups: 1. Social disapproval of drinking by friends, parents; marital problem from drinking. 2. Job trouble from drinking; traffic arrests from drinking; other police trouble from drinking. 3. Frequent blackouts; tremor; withdrawal hallucinations; withdrawal convulsions; delirium tremens. 4. Loss of control; morning drinking.

Goodwin *et al.*, 1975.

Table 2

CHILDHOOD DIFFERENCES

	Alcoholics N=14	Non-alcoholics N=119
Below average school performance	43	15
Hyperactive	50	15
Often truant or antisocial	21	2
Combination of above	57	15
Shy, sensitive, insecure	64	20
Aggressive, impulsive, hot tempered	50	18
Often disobedient	29	4

Goodwin, Schulsinger, Hermansen, Guze and Winokur (1975).

Table 3.—Percentage of Times Items Were Endorsed by Each Group on Minimal Brain Dysfunction Questionnaire

Characteristic	Primary Alcoholics	Secondary Alcoholics	Psychiatrics	Normals
Daydreams*†	78	46	51	22
Feels left out*†	73	25	44	14
Impulsive*†	71	21	30	25
Not working up to ability*†	68	14	42	14
Easily frustrated*†	63	14	40	0
Can't tolerate delay†	63	14	44	11
Can't sit still*†	52	10	22	7
Withdrawn*	52	14	32	14
Can't accept correction*†	52	21	24	11
Poor handwriting*†	50	14	22	18
Short attention span*†	44	7	24	0
Fidgets*†	44	7	18	11
Doesn't complete projects*†	44	7	22	0
Lying	44	25	26	0
Demands attention (affection)†	42	10	36	14
Truancy	39	3	22	0
Overactive*†	36	10	16	11
Gets into things†	36	10	20	7
Unpredictable	36	3	24	7
Responds best to structure when decisions made for you	36	17	28	11
Fights	34	17	22	11
Unpopular with peers†	31	3	14	3
Wears out toys, clothes	28	14	16	18
Unresponsive to discipline†	28	3	18	0
Stealing	28	10	16	0
Vandalism†	26	3	14	3
Temper tantrums	26	7	30	0
Talks too much or too loud	26	7	18	22
Difficulty in mathematics	23	7	34	14
Moves from one object to another in class	21	3	12	0
Accident prone†	21	0	14	3
Overly aggressive	21	3	6	0
Doesn't follow directions	18	3	16	0
Difficulty learning to read	15	0	4	7
Destructive	15	7	10	0
Constantly touching other people or things	13	0	6	0
Rocking	10	0	2	3
Difficulty learning to write	10	0	2	0
Infant feeding problems	7	0	6	18
Difficulty deciding whether left or right handed	7	0	8	7
Delayed time in walking	5	0	0	7
Poor coordination	5	0	4	0
Mirror vision (reading backwards)	5	3	6	0
Delayed speech development	2	0	4	0
Infant sleep problems	2	0	2	7
Poor speech	2	0	6	0
Left back in school	2	3	10	0
Difficult toilet training	2	0	2	0
Strabismus (cross-eyed)	0	0	6	0
Perseveration (gets one thing on mind and it stays there for long periods	0	3	6	0

*Primary alcoholics significantly different from other three groups.
†Primary alcoholics significantly different from secondary alcoholics.

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Mary Cover Jones

Junior High School Q-Sort Ratings on Which Problem Drinkers Have Low Scores

Trait	Mean			Significance of D_M	
	Problem[a]	Moderate[b]	Abstainer[c]	Prob.–Mod.	Prob.–Abs.
Overcontrolled	3.1	6.1	6.3	.01	.05
Emotionally bland	3.4	5.4	3.0	.05	
Dependable	4.7	6.8	7.2	.10	
Objective	4.2	5.2	5.5	.05	
Fastidious	3.3	5.5	7.7	.01	.01
Introspective	3.99	4.4	6.5		.10
High aspiration	4.8	6.0	8.0		.10
Favors status quo	4.8	5.9	4.8	.10	
Dependent	3.8	5.4	5.7	.05	
Accepts dependency	3.9	6.1	4.8	.05	
Seeks reassurance	4.3	5.5	5.7	.10	
Submissive	3.2	5.2	4.7	.05	
Wide interests	4.7	5.1	7.3		.05
Esthetic	3.8	5.1	5.5	.10	
Evaluates motives	4.1	4.1	5.7		.05
Thin-skinned	4.9	6.3	7.5	.10	
Vulnerable	2.9	4.9	5.5	.05	
Preoccupied	3.7	4.8	5.2	.05	
Complicated	3.2	4.6	4.2	.05	
Unconventional thoughts	4.1	4.9	7.5		.10
Considerate	4.2	5.8	5.5	.05	

[a] $n = 6$.
[b] $n = 17$.
[c] $n = 2$.

Table 5

Description of the Minnesota Multiphasic Personality Inventory (MMPI) Empirical Scales Three Validity and Ten Clinical Scales*

Scale Number	Scale Name	Clinical Expression	Normal Expression
	L	Unlikely degree of virtue	Score 10
	F	Many unusual symptoms	Score 16
	K	None	Circumspect; social desirability set; or, with low score, candid; low self-esteem
1	Hs	Hypochondriasis	Tired; inactive; lethargic; feels physically ill
2	D	Depression	Serious; low in morale; unhappy; self-dissatisfied
3	Hy	Hysteria	Idealistic, naive, articulate, ill under stress; social
4	Pd	Psychopathic deviation	Rebellious, cynical; disregards rules; socially aggressive; selfish
5	Mf	Interest pattern of the opposite sex	High score; sensitive. Low score; exaggerated own sex interest
6	Pa	Paranoia	Perfectionistic; stubborn; hard to know; or, with moderate scores, socially acceptable
7	Pt	Psychasthenia	Dependent; desires to please; feelings of inferiority; indecisive; anxious
8	Sc	Schizophrenia	Negative; difficult; odd; apathetic; lacks social grace
9	Ma	Hypomania	Expansive; optimistic; decisive; not bound by custom
0	Si	Social introversion	Unassertive; self-conscious; shy; or, with low score, socially active

* Hathaway, S.R. and Monachesi, E.O. Adolescent Personality and Behavior. Minneapolis: The University of Minnesota Press, 1963, p. 28.

TABLE 1

MEANS AND STANDARD DEVIATIONS ON MMPI RAW SCORES FOR PREALCOHOLIC MALE COLLEGE FRESHMEN AND CLASSMATE CONTROLS

Scale	Prealcoholic (N = 32)		Control (N = 148)		t
	M	SD	M	SD	
L	3.1	2.4	3.5	2.1	− .87
F	5.3	3.2	3.7	2.8	2.55*
K	15.7	4.2	16.7	5.0	−1.10
1 Hs	4.8	4.5	3.4	3.0	1.65
2 D	18.8	5.5	17.6	4.5	1.09
3 Hy	20.7	4.5	20.1	3.8	.68
4 Pd	18.9	5.2	15.6	4.0	3.23**
5 Mf	25.9	6.2	24.7	4.7	1.03
6 Pa	9.0	2.7	9.5	2.7	− .81
7 Pt	12.1	8.1	9.8	7.2	1.49
8 Sc	11.7	7.3	9.6	6.8	1.46
9 Ma	18.4	4.6	16.0	4.5	2.71**
0 Si	23.6	9.8	23.7	10.0	− .81
Mi	12.4	7.4	9.8	6.6	1.81

*$p < .05$.
**$p < .01$.

TABLE 2

WIGGINS MMPI CONTENT SCALE MEANS AND STANDARD DEVIATIONS FOR COLLEGE FRESHMAN MALE PREALCOHOLICS AND CLASSMATE CONTROLS

Scale	Prealcoholic (N = 32)		Control (N = 148)		t
	M	SD	M	SD	
Social Maladjustment	6.6	4.2	8.1	6.0	−1.71
Depression	6.3	4.9	5.5	4.5	.78
Feminine Interests	9.2	3.4	8.6	3.4	.91
Poor Morale	6.7	3.9	5.8	4.7	1.14
Religious Fundamentalism	6.0	3.2	6.6	3.1	− .88
Authority Conflict	9.3	3.6	7.2	3.7	3.02**
Psychoticism	6.4	4.4	5.5	4.3	1.17
Organic Symptoms	4.2	3.6	3.6	3.2	.84
Family Problems	4.8	3.6	3.8	2.9	1.40
Manifest Hostility	9.6	4.1	8.2	4.4	1.69
Phobias	4.7	2.3	4.7	3.1	.12
Hypomania	13.0	4.7	11.6	3.6	1.56
Poor Health	4.6	3.1	3.5	2.8	1.99*

*$p < .05$.
**$p < .01$.

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TABLE 3.—*Mean Scores (±SD) of Alcoholics at College and of Classmate Controls on MMPI Alcoholism Scales*

Scale	*Alcoholics*	*Controls*	*t*
Hampton	46.00 ± 12.32	42.67 ± 11.80	1.26
Holmes	31.16 ± 4.03	29.51 ± 4.31	1.88
Holmes Unique	14.32 ± 1.87	13.99 ± 2.55	0.79
Hoyt & Sedlacek	39.16 ± 3.41	39.67 ± 3.44	−0.69
Hoyt & Sedlacek Unique	14.20 ± 4.42	13.43 ± 4.29	0.81
MacAndrew	26.60 ± 5.09	23.99 ± 3.79	2.44*
MacAndrew Unique	18.24 ± 3.98	16.29 ± 3.46	2.32*
Rosenberg	14.32 ± 2.15	13.27 ± 2.32	2.23*
Linden	18.60 ± 3.75	18.31 ± 3.68	0.36

* $P < .05$.

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Table 1. MMPI *T* Scores of Preuser and Control Groups

Scale	Preusers (n = 33) Mean	Preusers (n = 33) SD	Control group (n = 33) Mean	Control group (n = 33) SD	t
L	47.91	6.22	48.36	5.90	-0.304
F	58.67	8.10	56.64	7.96	1.027
K	57.12	6.76	55.42	7.41	0.972
Hs	55.24	9.17	51.55	7.36	1.807
D	56.61	10.36	55.03	11.23	0.592
Hy	61.48	6.57	57.94	7.64	2.020*
Pd	64.82	10.67	59.52	10.04	2.080*
Mf (male)	64.70	10.11	64.70	9.08	0.000
Mf (female)	45.17	6.82	51.17	9.60	-1.248
Pa	59.06	8.07	55.64	9.44	1.584
Pt	60.12	12.04	58.79	11.06	0.469
Sc	64.18	11.94	60.06	10.87	1.466
Ma	63.88	11.43	57.85	11.53	2.134*
Si	49.27	8.70	50.39	9.26	-0.507
Es	50.40	5.27	60.58	7.57	-6.340**
Mt	49.88	9.14	48.52	8.32	0.634

*$p < .05$.
**$p < .001$.

Table 2. Comparison of Selected MMPI Dimensions for Preuser and Control Groups

Indicator	Preusers (n = 33)	Control group (n = 33)
No scales over *T* of 70	15	16
1 scale over *T* of 70	5	8
4 or more scales over *T* of 70	6	3
Basic *Pd*/*Ma* or *Ma*/*Pd* profiles	8	2
Sc highest scale	7	2
Pd highest scale	7	3
Sc *T* score ≥ 70	11	6
Pd *T* score ≥ 70	8	4
Dissimulation score means ($F - K$)	-9.8	-9.5